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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,091	09/25/2006	Shuichi Murakami	1018793-000277	8852

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EXAMINER	
LENIHAN, JEFFREY S	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
10/27/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No.	Applicant(s)	
	10/594,091	MURAKAMI ET AL.	
	Examiner	Art Unit	
	Jeffrey Lenihan	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,13 and 15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *15* is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☒ Claim(s) *7-11 and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/23/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the amendment filed on 06/17/2009.

2. The objections and rejections not addressed below are deemed withdrawn.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Claim Rejections - 35 USC § 102/§ 103

4. Claims 1-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Maruyama et al, US4707512.

5. The rejection stands as per the reasons outlined in the previous Office Action, incorporated herein by reference. Regarding the newly added limitation in claim 2 that the compatibilizer is a reactive compatibilizer, it has been held that a chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present, see *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) (MPEP § 2112.01). As discussed in the previous Office Action, one of ordinary skill in the art would reasonably expect that the composition of Maruyama would contain a compound having the same structure as the claimed resin modifier; examiner therefore takes the position that the properties of said compound would necessarily be the same as claimed and inherently be not materially different from those of the claimed invention.

6. Claims 1-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sakai et al, JP 2003268215, a machine translation of which has been included with this Office Action.

7. The rejection stands as per the reasons outlined in the previous Office Action, incorporated herein by reference. Regarding the newly added limitation in claim 2 that the compatibilizer is a reactive compatibilizer, one of ordinary skill in the art would reasonably expect that the composition of Sakai would contain a compound having the same structure as the claimed resin modifier as discussed in the previous Office Action; the examiner therefore takes the position that the properties of said compound would necessarily be the same as claimed and inherently be not materially different from those of the claimed invention.

Response to Arguments

8. Applicant's arguments filed 06/17/2009 regarding claims 1-6 have been fully considered but they are not persuasive. The examiner notes that independent claim 1 is written in product-by-process format; process steps are therefore considered only to the extent that they affect the final structure and/or properties of the claimed invention.

9. Applicant has amended independent claim 1 to recite “a resin modifier (C) obtained by reacting a mixture consisting essentially of” a polyolefin (A) which contains functional groups reactive to carbodiimides and a carbodiimide-containing compound (B); applicant further cites the data presented in the specification for two examples as evidence that the presence of additional polymer components (D) and (E) during the

reaction of component (A) with (B) alters the basic and novel properties of claimed resin modifier (C). Inventive Example 1 discloses a composition prepared via a process wherein components (A) and (B) are first reacted to form the resin modifier (C), followed by mixing said resin modifier (C) with components (D) and (E). Comparative Example 13 discloses a composition prepared by combining components (A), (B), (D), and (E); the prior art compositions of both Maruyama and Sakai are prepared via processes similar to that of Comparative Example 13.

10. It has been held that "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s) of the claimed invention;" see *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). Absent a clear indication in the specification or claims of what the basic and novel characteristics of the invention actually are, the phrase "consisting essentially of" will be construed as equivalent to "comprising" for the purposes of searching for prior art under 35 U.S.C. 102 and 103; see *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355 (MPEP § 2111.03). As discussed above, the data cited by applicant for Example 1 discloses the properties of a composition comprising resin modifier (C) and two additional polymers. Independent claim 1, however, only recites resin modifier (C); the claimed invention of claim 1 is not a composition comprising resin modifier (C) in addition to polymers (D) and (E). The examiner therefore takes the position that the data of cited examples are not commensurate in scope with the claimed invention.

11. Furthermore, the examiner notes that, based on the provided data, it is not clear whether the different properties are the result of changes in the structure/properties of resin modifier (C), as alleged by applicant, or are the result of different amounts of resin modifier (C) being present in the final compositions of the Inventive and Comparative Examples. The examiner therefore takes the position that the data cited by applicant at best demonstrates an alleged material difference in the properties of two compositions prepared via different processes; the data is not sufficient to demonstrate that the novel and basic characteristics of the claimed resin modifier (C) are materially altered by the presence of the additional polymer during the reaction of components (A) and (B).

12. As discussed in the previous Office Action, both Maruyama and Sakai disclose compositions prepared by combining a polyester, a polyolefin grafted with maleic anhydride, taught by applicant to be suitable as claimed polyolefin (A), and a carbodiimide-containing compound, corresponding to claimed carbodiimide (B). As the prior art compositions both comprise 1) carbodiimide compounds and 2) polyolefins having functional groups reactive towards carbodiimide compounds, one of ordinary skill in the art would reasonably expect that at least some of the carbodiimide molecules and graft-modified polyolefin molecules would react, resulting in the claimed resin modifier that is the product of reacting a polyolefin (A) having carbodiimide-reactive functional groups and carbodiimide-containing compound (B). As the PTO is not equipped to perform experiments, the burden is shifted to applicant to provide factual evidence that the claimed resin modifier is not present in the compositions disclosed by Maruyama and Sakai.

13. Applicant's argument that Maruyama does not require the addition of a carbodiimide-containing compound is not persuasive, as the rejection outlined in the previous Office Action was based on a prior art Example wherein said carbodiimide-containing compound was added to the composition (see paragraphs 10-12of the previous Action, incorporated herein by reference).

Allowable Subject Matter

14. Claim 15 is allowed.

15. Claims 7-11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter: Claims 7 and 15 recite the following:

> 7. (Currently Amended) A polar group-containing polymer composition (F) comprising from 1 to 30% by weight of the resin modifier (C) according to claim 1, from ~~99 to 20%~~ 80 to 25% by weight of a polar group-containing polymer (D), and from ~~0 to 80%~~ 5 to 60% by weight of an olefin polymer (E), provided that the sum of (C), (D) and (E) is 100% by weight.

wherein claim 1 defines resin modifier (C) as being obtained by reacting a mixture consisting essentially of a polyolefin (A) having a group reactive towards carbodiimides and a carbodiimide-containing compound (B), wherein the content of carbodiimide group is from 1 to 200 mmol per 100 g of resin modifier.

15. (Currently Amended) A method for producing a resin composition comprising:

a step of kneading and mixing a polyolefin (A) having a group which reacts with a carbodiimide group, and a carbodiimide group-containing compound (B) to obtain a resin modifier (C), wherein the content of the carbodiimide group is from 1 to 200 mmol per 100 g of the resin modifier (C), and further,

a step of kneading and mixing from 1 to 30% by weight of said resin modifier (C), from 80 to 25% by weight of ~~the kneaded product obtained and~~ a polar group-containing polymer (D) and from 5 to 60% by weight of an olefin polymer (E) (provided that the sum of (C), (D) and (E) is 100% by weight.

17. The closest prior art is Maruyama et al, US4707512. Example 13 of Maruyama discloses a composition comprising 100 parts by weight polybutylene terephthalate, corresponding to the claimed polar group-containing polymer (D); 12 parts by weight of an ethylene/1-butene copolymer grafted with maleic anhydride, corresponding to the claimed polyolefin (A); and 0.5 parts by weight bis(dipropylphenyl)carbodiimide corresponding to the claimed carbodiimide-containing compound (B).

18. With regards to claim 7, Maruyama does not teach nor does it fairly suggest a composition defined by the claimed combination of limitations of 1 to 30% by weight of resin modifier (C), 25 to 80% by weight of a polar group-containing polymer (D), and 5 to 60% by weight of an olefin polymer (E), provided that the sum of (C), (D), and (E) is 100% by weight.

19. With regards to claim 15, the composition of Murayama is prepared by a process comprising the steps of mixing the compounds discussed in paragraph 15 all at once.

The prior art does not teach nor does it fairly suggest a process defined by the claimed combination of steps currently recited in independent claim 15.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Lenihan whose telephone number is (571)270-5452. The examiner can normally be reached on Monday through Thursday from 7:30-5:00 PM, and on alternate Fridays from 7:30-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

/Jeffrey Lenihan/
Examiner, Art Unit 1796

/JL/